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## News Summary

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**SEEK QUICK ACCORD**

## *U.S. and Soviet Leaders Agree to Increase Cooperation in Some Scholarly Areas, but Fail to Sign Science Pact*

By PATRICIA LEGRAS

MOSCOW

American and Soviet leaders agreed here last week to renew, extend, and broaden cooperation in education, atomic energy, and the peaceful uses of outer space.

The agreements, signed during President Reagan's summit meeting with Soviet leader Mikhail S. Gorbachev, are expected to increase substantially the scholarly ties between the two countries.

Contrary to pre-summit expectations, however, officials of the two countries failed to reach final agreement on a proposal that would have greatly broadened Soviet-American cooperation in the basic sciences.

Last month, State Department and Soviet officials signed a draft of the basic-science accord after a delegation led by Vladimir Yeyzhkovv, deputy chairman of the Soviet State Committee for Science and Technology, traveled to Washington to negotiate the details with American representatives.

### Access to Advanced Technology Feared

But some Reagan Administration officials, after reviewing the draft, complained about a provision that would have allowed scientists from industry, as well as from higher education and government, to participate in joint basic-science projects.

Although the Americans involved in the negotiations did not regard that as a problem, the Pentagon was concerned that it would give the Soviets access to advanced technology useful to their military forces.

State Department officials now plan to rewrite a portion of the agreement so it can be signed quickly. A State Department source said the existing language was not viewed as "symmetrical" because the Soviet Union does not have scientists from private companies.

At the summit, Mr. Reagan and Mr. Gorbachev issued a statement instructing their negotiators to "accelerate efforts

*Continued on Page A30*

**With a bust of Lenin behind him, President Reagan speaks at Moscow State U. Excerpts from his remarks: Page A29.**

REUTERS/BETTMANN NEWSPHOTO

## Bush Committed to Schools and Colleges but Unsure of Specifics, Adviser Says

By SCOTT JASCHIK

NASHVILLE

Even though Vice-President George Bush "didn't quite know what he meant" when he said he wanted to be known as "the education President," he is committed to pushing for improvements in the nation's schools and colleges, says Lamar Alexander, the former Governor of Tennessee who has been advising the likely Republican Presidential nominee on education issues.

Mr. Bush should push for education reforms by making persistent public statements and convening meetings of governors and education officials rather than by creating new federal programs, says Mr. Alexander, who will become president of the University of Tennessee system next month.

Because the Vice-President has offered few specifics on his plans for education, the views of Mr. Alexander have been closely watched by higher-education of-

*Continued on Page A16*

**How to Deal with AIDS Epidemic: Big Issue for Medical Students**

The AIDS epidemic is affecting how medical students and health officials look at clinical training and the profession of medicine itself: Page A23.

## *In an Unexpected Move, Pentagon Stops Awarding New Research Contracts*

By COLLEEN CORDES

WASHINGTON

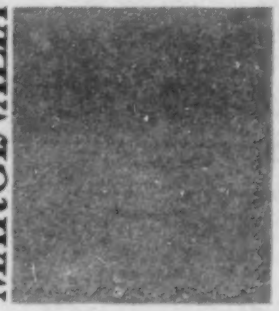
The Department of Defense has suddenly stopped awarding new research contracts, confusing many people at universities and sparking fears that institutions may not be reimbursed for some money they have already given to researchers.

The Pentagon ordered a temporary "deferral" of new research contracts, to last at least through the rest of this month, as one of several new steps to help slow down the rate at which the department is spending money.

Defense officials said the action was

*Continued on Page A19*

## MARGINALIA



Blurb on an envelope from *Academic Leader:*

"The 5 Stages of Evolution in the Academic Department

"1) Young Department. Few members. Chair rules autocratically.

"2) Encountering Turmil. Increased size. Power struggle. Low morale. Chair is apt to resign.

"3) Rampant democracy. Department chair spends an absurd amount of time in committe meetings and . . . (*continued inside*)"

Hang those committe meetings; we're too caught up in the turmil.

■

An announcement of the summer graduate program at VanderCook College of Music lists the professors under the following heading:

OUR DESTINGUISHED FACULTY

■

But what right have *we*, in our glass house, to throw stones?

"Dear friends," writes David M. Stearman of the Association of American Colleges:

"Re: 'Wherefore Art Thou Hamlet? Grand Central Station, You Say!' (headline in *The Chronicle*, May 18). As a publication dedicated to higher education, you ought to be ashamed. 'Wherefore' means 'why,' not 'where.' (Juliet was distressed about Romeo's name—his family, that is—not his location.) Conflating *Hamlet* with *Romeo and Juliet* is one thing (deliberate, I assume—I hope!). Propagating a gross misreading of the text is another.

"As Robin Goodfellow might say, 'What fools these headline writers be.' It appears something is rotten in the *Chronicle* editorial offices."

Replies our hapless headline writer:

"Wherefore was I borne?"

■

Memorandum to the Council of Deans from the Librarian at California State University, Sacramento:

"In response to concerns from students and others about high noise levels in the Library, we have added a Silent Study category on top of the Quiet Study category. We have also developed operational definitions for silent study, quiet study, and interaction (service) areas. . . ."

Shhh!

■

Before a reception and dinner for former President Gerald Ford at the University of California at Davis, this notice was posted on the door of the faculty club:

"Due to President Ford's visit today, there will be no Happy Hour."

Come now; it won't be *that* bad.

■

We'd rather not think so, but our readers may welcome this news as much as we do: We'll be on vacation for the next three weeks, and this column will be, too. —C.G.

# In Brief

## Army Secretary Overrules a West Point Expulsion

A high Pentagon official has ordered the reinstatement of a fourth-year cadet who was expelled from the United States Military Academy for violating its honor code.

The cadet, Anthony S. Ketron, was expelled in March by the academy's superintendent, Lieut. Gen. Dave R. Palmer. A jury of cadets had found Mr. Ketron guilty of two counts of quibbling on his application for a Rhodes Scholarship. Quibbling is defined as hedging on the truth, a West Point spokesman said.

The reinstatement was ordered by Delbert L. Spurlock, Jr., Assistant Secretary of the Army for Manpower and Reserve Affairs. It marked the first time an Army official had ruled against an expulsion recommended by the superintendent, the spokesman said.

## Rutgers Must Open Files, N.J. Supreme Court Rules

Rutgers University must make confidential peer-review materials available to a faculty member who is pursuing a sex-discrimination case against it, the New Jersey Supreme Court has ruled.

Rutgers had asked the court to reverse a lower-court ruling that ordered certain documents to be made available to an administrative-law judge preparing to hear the case.

Ruth Dixon, a tenured assistant professor of education at the university's Camden campus, filed the sex-discrimination complaint with the state after she was denied a promotion to associate professor nearly 11 years ago.

The 37-page Supreme Court decision acknowledged the need for a confidential peer-review process in academe, but said that certain documents must be made available to prevent institutions from blocking evidence of discrimination. However, it also said that to prevent frivolous complaints, a plaintiff must show a substantial basis for requesting the documents.

## Texas Board Issues Ban on Contraceptives

Contraceptives may be neither prescribed nor dispensed at health centers at four Texas universities under a new policy adopted by the state university system's Board of Regents.

The board, which oversees Southwest Texas State, Sam Houston State, Angelo State, and Sul Ross State Universities, voted to allow, and in some cases extend, sexuality counseling at the four campuses. However, contraceptives, including condoms, will not be provided or prescribed.

Fernando C. Gomez, general counsel for the board, said members felt universities "should be in the business of education and not providing extended health care."

But Lee Brandt, student-body president at Southwest Texas State, told the board that many students would not take advantage of the counseling if their health centers did not provide contraceptives.

"One of the results is likely to be an increase in the number of unwanted pregnancies," he said.

Students plan to fight the ban.

## $2.7-Million in Aid Given to Rectify School's Errors

The Hastings School of Law in San Francisco will contribute $2.7-million for student scholarships and loans under an agreement with the California Attorney General's office to rectify earlier misuse of scholarship funds at the school.

A state audit and the Attorney General's office found that the school, which is affiliated with the University of California, had improperly used scholarship funds to purchase real estate in San Francisco between 1973 and 1987.

A new $2.7-million fund for scholarships and student loans at Hastings will be established and include $1.6-million for restitution to students or former students who were denied aid because of the misuse of funds.

The state audit led to the departure of Bert S. Prunty as dean of the law school last year. The San Francisco district attorney's office concluded after an investigation that there was no evidence of wrongdoing by Mr. Prunty.

## Journalism Program Set for Central America

The United States Agency for International Development has awarded $9-million to Florida International University to develop a journalism program in Central America.

The grant, which will cover operational expenses for the first five years of the seven-year project, will help the university's communication department establish a research and training center in Central America. The goal is to create a permanent, self-sufficient program operated by Central American journalists.

The agency is expected to allocate an additional $3-million to the project to support professional seminars, the publication of a journal, and the establishment of a Spanish-language journalism library at the university. The library will eventually be transferred to Central America.

## U. of California Criticized in Latino Group's Report

A Latino group has assailed the University of California for failing to enroll more Latino students and to hire more Latino faculty members and administrators.

The Latino Issues Forum, a

## FBI Sued Over Its Program to Catch Spies in Libraries

WASHINGTON

People for the American Way, a liberal public-interest group, and the National Security Archive, a library of declassified government documents, have sued the Federal Bureau of Investigation to gain access to documents related to the bureau's "Library Awareness Program."

As part of that program, the F.B.I. sent agents to academic and public libraries to enlist librarians in efforts to identify potential spies from the Soviet Union. Bureau officials said the program was necessary because foreign agents often use libraries—and librarians—to help them get information about technology "before its components become classified or restricted," according to a recent bureau report on the program.

The organizations hope to force the F.B.I. to release information about the program. Requests under the Freedom of Information Act have not produced any documents.

"The program is running roughshod over Americans' rights," said Arthur J. Kropp, president of People for the American Way.

"In their eagerness to catch spies who might be gleaning publicly available, yet somehow sensitive, information from American libraries, the F.B.I. appears to be casting a net so broad in its scope that ordinary citizens engaged in harmless research could easily become enmeshed in a web of suspicion."

F.B.I. officials would not comment on the lawsuit.

—JUDITH AXLER TURNER

## *Dormitory Tower at Princeton Wins Architecture Award*

WASHINGTON

A copper-roofed dormitory tower at Princeton University (*right*) has earned one of this year's honor awards from the American Institute of Architects.

The building, Feinberg Hall, was designed by Tod Williams of the New York firm Tod Williams, Billy Tsein and Associates. It is intended to house 40 students.

Standing beside a sloping walk that joins upper and lower parts of Princeton's campus, the tower has a brick exterior and a steeply pitched roof. It is angled slightly away from the row of buildings it completes, and offers as its most prominent feature a massive exterior stair tower topped by a metal-and-glass canopy. The canopy's edges rise to form a gentle "V."

The institute's jury praised the tower as "a small gem, an exclamation mark, pulled slightly out of the row of buildings in which it sits, bringing a new identity and sense of place to its site." Feinberg Hall was the only building on a college or university campus to win an honor award from the institute this year.

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# Footnotes

**Do baseball players** live longer than other people?

Yes, and right-handed players live longer than left-handers, according to two studies published in scientific journals lately.

While neither the journal *Nature* nor the *New England Journal of Medicine* gave the studies the full dignity of research articles, both have published analyses of baseball players' life spans in recent issues.

In the May 12 issue of the *New England Journal of Medicine*, four researchers with seven graduate degrees among them found that "being a baseball player confers a minimally protective effect against death." The death rate for baseball players who played their first major-league games between 1911 and 1925—excluding those who died before 1925—is lower than the death rate for all American white males, the researchers said. The longer a player stayed in the game and the better he played, the better chance he has of being alive today, they found.

Two other researchers reported in the May 19 issue of *Nature* that an analysis of baseball players listed in *The Baseball Encyclopedia* showed that the average age at death for right-handed players was 64.64 years old, while left-handers lived to an average age of 63.97 years.

■

**The writing of black Americans** in the 19th and early 20th centuries had been all but invisible until a few years ago, when a handful of scholarly detectives began uncovering the little-known works.

Maryemma Graham is one of that band of literary gumshoes. As director of the Afro-American Novel Project at the University of Mississippi, Ms. Graham is attempting to track down and catalog an estimated 1,100 novels written by black Americans between 1853 and 1980.

In the period it encompasses, Ms. Graham's project goes beyond such similar endeavors as the Black Periodical Fiction Project at Cornell University, which covers the years from 1827 to 1919, and Oxford University Press's 30-volume *Schomburg Library of Nineteenth-Century Black Women Writers*. But the earlier works have proved most elusive.

"The South seems to be a very rich place for making these discoveries," she said. "They're not in bookstores. We have to do our searching in attics, family basements, garages, church records."

Ms. Graham and her colleagues are now assembling a "checklist" of the books—essentially a bibliography that's not annotated—to be published in late 1989. After that she hopes to put together a collection of "hands-on copies" of all the books, as well as an annotated bibliography. At the moment, there's no end in sight to the project.

"We think we have about 90 per cent," she said, "but we never want to close off the possibility of new things coming up."

**Scholarship**

# U.S. Research Libraries Search for Ways to Combat Spiraling Subscription Costs of Scholarly Journals

## Prices rose 18.2 per cent in 1986-87, study finds; a few publishers account for most of the increase

By JUDITH AXLER TURNER

Responding to complaints that publishers of scholarly journals are engaging in "price gouging" and "profiteering," the Association of Research Libraries has decided to explore alternative publishing arrangements, including the possibility of having small American publishers begin new journals to compete with the major journal publishers.

At the same time, colleges and universities are cutting back on subscriptions and exploring ways to cut costs by sharing subscriptions among themselves.

The moves come on the heels of a study by the association that found a median rise of 18.2 per cent in journal prices in 1986-87—with the greatest increases coming from a small number of publishers.

Librarians point out that more and more journals—especially those priced over $200 a year—come from fewer and fewer publishers, most of them overseas. Although the drop in the value of the dollar has hurt libraries, librarians say that subscription prices have risen far more than is warranted by the changing exchange rate.

"If the major scientific and technical journals are published by a limited number of publishers, they have a kind of monopoly," says Jeffrey J. Gardner, director of the association's Office of Management Services. "We need to work with other publishers and university presses to begin to produce journals in direct competition with some of the ones we think are so overpriced."

The association will look at options this summer as part of a study of journal pricing. The study, to be done by professional economists, will determine the effects on subscription prices of currency fluctuations, inflation, a smaller subscription base, and more pages. Publishers say changes in those areas force prices up.

**The holdings** and expenditures of major research libraries in the United States and Canada ar[illegible] on Page A6.

Many librarians believe, however, that publishers are simply trying to charge as much as the market will bear.

Publishers, they say, realize they have a captive audience. Librarians cite a line from a letter sent by one publisher to his company's stockholders: "Historically, libraries have been concerned with the quality of the contents of journals, with the price being of lesser importance."

Part of the problem, says Michael A. Keller, associate university library for collection development at Yale University, is academe itself, which often rewards faculty members for the number of articles they have published, rather than for the quality of the articles.

Mr. Keller hopes to rouse librarians to urge scholars to reevaluate tenure and promotion policies that depend on the number of articles they publish. "The meaning of 'contribution to knowledge' now has financial implications to the whole community," he says.

Yale is one of the universities interested in supporting electronic publishing—the distribution of scholarly articles over computer networks, Mr. Keller says. "The prices of journals are so high that if we can cut the publishers out, we should do so," he adds.

The Research Libraries Group, a consortium of 37 libraries, has polled its members to find out which ones subscribe to what publications, and whether they intend to continue those subscriptions, as a first step in a cooperative effort to develop their collections.

Libraries will then be able to cancel subscriptions with the knowledge that a journal is available elsewhere through interlibrary loans.

Nine universities in the Midwest are also exploring the possibility of sharing their journal collections so each can subscribe to fewer publications.

In Canada, institutions are banding together to try to work out bulk-purchase arrangements with foreign publishers. Libraries there must cope with a devalued

*Continued on Page A6*

# *2 National Reports on AIDS Urge Increased Federal Support for Building and Improvement of Research Laboratories*

By DAVID L. WHEELER

WASHINGTON

Two national reports on AIDS released last week came out in favor of spending more money to improve old laboratories and build new ones for scientists who are working with the AIDS virus.

The two reports, one an update of a previous one by a committee of the Institute of Medicine and the other the draft report of the Presidential AIDS commission, also agreed that a wider variety of people with AIDS—especially women, children, and drug abusers—should be involved in trials of drugs being developed to treat AIDS.

Of the two reports, the one by the commission—formally called the Presidential Commission on the Human Immunodeficiency Virus Epidemic—gave the more urgent and specific recommendations about the need for new research facilities. The draft released last week was written primarily by the chairman, Admiral James D. Watkins, but it reflects all of the testimony the commission received and the opinions of many commission members.

### Training for Health-Care Workers

The draft report recommended:

- That construction money be made available for AIDS laboratories in the fiscal year beginning in October.
- That the National Institutes of Health be given the authority to make decisions about construction and renovation at universities so money could be spent quickly to upgrade laboratories.
- That money be made available for renovation or construction to create at least nine research centers for work on retroviruses—AIDS is a retrovirus—and on structural biology, including the structure of the proteins that make up the AIDS virus.

The draft report also made sweeping and detailed recommendations about spending money to teach nurses, physicians, and other health-care workers about treating AIDS patients. It suggested beefing up the National Health Service Corps—a program the Reagan Administration has been phasing out. The corps gives scholarships to medical students in return for later work in "underserved areas." The report said that many AIDS patients were not getting adequate health care and that more were likely to be poorly served in the future.

Federal financial support should also be given, the commission said, to graduate and postgraduate researchers who are working on understanding the transmission of AIDS, the factors that influence the susceptibility of individuals to infection with AIDS, and sexual behavior.

The Presidential commission also suggested specific mechanisms—such as setting up discretionary funds—to get money quickly to researchers proposing good ideas for AIDS research.

In addition to the Presidential commission's report, an update of the 1986 report, *Confronting AIDS: Directions for Public Health, Health Care, and Research*, was released last week by the Institute of Medicine and the National Academy of Sciences. The update was produced by a different committee from the one that produced the original report.

### Sharing of Data and Materials

The Presidential commission's report and the institute's committee both emphasized the need for improved sharing among scientists of research results and biological materials such as cells, antibodies, and proteins from the virus. The commission's draft report suggested a series of registries and computer networks so that scientists, journalists, and AIDS patients could quickly find out what was going on in AIDS research. Currently, the commission noted, even those who most need information about experimental drug treatments—the doctors of AIDS patients—cannot get the information quickly, if at all.

The institute's report will be available after June 15 by mail for $15.95 from the National Academy Press, 2101 Constitution Avenue, N.W., Washington 20418.

Copies of the Presidential commission's draft report can be obtained free from the commission at 655 15th Street, N.W., Suite 901, Washington 20005.

# Libraries Seek Ways to Combat Rising Journal Costs

*Continued from Page A4*

Canadian dollar. Peter L. Freeman, chief librarian at the University of Alberta, points out that Canadian libraries must pay North American subscription prices, which are set in U.S. dollars. The dollar currently is valued about 20 per cent higher than its Canadian counterpart.

### Dollar's Drop Is a Factor

Subscriptions to journals range from under $50 a year to more than $8,000 for *Chem Abstracts*, an index of chemistry journals. Publications in science and engineering typically cost the most, in part because the developments in those fields occur so rapidly that scientists and engineers are dependent on journals—rather than books, with their slower publication cycles—to keep up, and so are more willing to pay higher prices.

Prices have been rising for several years, but they jumped sharply last year because of the drop in the value of the dollar. Most of the high-priced journals are published overseas.

For example, subscriptions to *Brain Research* went from $2,871 in 1986 to $3,826 in 1987; *Verlag Chemie* increased prices 61.1 per cent in 1987; and *Synthetic Metals* went from $232.50 in 1985 to $850 in 1987. All are published abroad.

### Some Subscriptions Canceled

Not only are subscription-price increases out of line with the dollar's decline, say librarians, but North American subscribers are charged far more than other subscribers, even taking postage charges into account. *The Journal of Plasma Physics* costs $80 in England, where it is published, and $195 in the United States. *World Economy* costs $42 in England but $100 in the United States.

The most recent comprehensive study, in 1984, put the average differential between European and North American subscription prices at 67 per cent.

To redress the balance between spending on books and journals, libraries are canceling subscriptions.

- The libraries at the University of Illinois at Urbana-Champaign saved $166,000 last year by cutting subscriptions to 1,383 journals in its collections. The university's libraries have some 90,000 subscriptions—few of them duplicates after a mass cancellation several years back to hold down costs. The engineering library alone cut 161 journals from the nearly 1,200 in its collections.
- The University of California at Berkeley ran $300,000 over its $2.5-million budget in 1987, and cut the number of serials to which it subscribes by about 10 per cent.
- Cornell and Stanford Universities canceled subscriptions last year when each was faced with possible $600,000 overruns in its library-materials budget.
- The library at the University of Wyoming has asked academic departments to help cut out up to 10 per cent of the periodicals subscriptions to offset increased prices.

"It's a war of attrition," says Richard L. Dougherty, director of the library at the University of Michigan. "Eventually everybody will lose."

## 1986-87 Holdings of Research Libraries in U.S. and Canada

### University libraries

| | Rank[1] | Volumes in library | Volumes added | Current serials | Total staff | Total expenditures[2] |
|---|---|---|---|---|---|---|
| Harvard U. | 1 | 11,284,170 | 232,559 | 102,000 | 1,030 | $34,792,739 |
| U. of California at Los Angeles | 2 | 5,625,521 | 257,027 | 93,467 | 730 | 29,428,949 |
| U. of California at Berkeley | 3 | 7,031,934 | 206,181 | 99,065 | 756 | 26,998,169 |
| Yale U. | 4 | 8,391,707 | 160,953 | 56,412 | 679 | 21,855,300 |
| U. of Illinois | 5 | 7,190,443 | 193,407 | 93,913 | 547 | 15,346,678 |
| Stanford U.[3] | 6 | 5,598,363 | 167,055 | 49,780 | 621 | 25,852,247 |
| U. of Texas | 7 | 5,753,629 | 179,838 | 79,772 | 577 | 16,258,070 |
| U. of Toronto | 8 | 5,563,396 | 186,408 | 38,922 | 727 | 20,374,225 |
| Cornell U.[3] | 9 | 4,818,377 | 136,220 | 58,722 | 532 | 17,517,507 |
| Columbia U. | 10 | 5,625,925 | 121,276 | 42,779 | 624 | 20,008,645 |
| U. of Washington | 11 | 4,658,911 | 158,790 | 55,590 | 471 | 16,041,230 |
| U. of Wisconsin | 12 | 4,713,250 | 101,202 | 50,607 | 494 | 17,253,886 |
| U. of Minnesota | 13 | 4,382,696 | 112,850 | 38,630 | 428 | 17,881,544 |
| U. of Chicago | 14 | 4,865,137 | 113,277 | 53,214 | 336 | 13,424,913 |
| U. of North Carolina | 15 | 3,414,643 | 118,308 | 44,797 | 409 | 13,967,683 |
| Pennsylvania State U.[3] | 16 | 2,888,342 | 145,074 | 29,080 | 460 | 14,895,629 |
| Ohio State U. | 16 | 4,169,610 | 109,546 | 31,762 | 455 | 15,397,844 |
| Princeton U. | 18 | 3,961,415 | 109,948 | 33,140 | 380 | 13,762,225 |
| U. of Arizona | 19 | 3,239,055 | 104,623 | 31,423 | 366 | 11,807,837 |
| U. of Georgia[3] | 19 | 2,604,601 | 93,871 | 56,149 | 383 | 10,609,060 |
| Duke U. | 21 | 3,591,197 | 92,215 | 34,452 | 319 | 11,396,777 |
| Rutgers U.[3] | 22 | 2,407,696 | 114,490 | 19,041 | 465 | 15,664,381 |
| U. of Pennsylvania | 23 | 3,442,389 | 85,949 | 28,435 | 372 | 12,599,830 |
| U. of California at Davis | 24 | 2,159,570 | 86,492 | 50,004 | 324 | 12,808,628 |
| New York U. | 24 | 2,920,175 | 72,755 | 32,493 | 367 | 13,978,558 |
| U. of Virginia | 26 | 2,902,823 | 102,177 | 23,489 | 341 | 13,258,591 |
| Arizona State U.[3] | 27 | 2,215,376 | 122,690 | 31,366 | 351 | 11,436,506 |
| U. of British Columbia | 28 | 2,639,439 | 88,131 | 22,833 | 419 | 11,893,424 |
| U. of Alberta[3] | 29 | 2,658,752 | 93,512 | 21,422 | 401 | 11,785,086 |
| Northwestern U. | 30 | 3,270,365 | 80,511 | 32,304 | 356 | 10,650,409 |
| U. of Florida | 31 | 2,605,601 | 79,610 | 29,512 | 404 | 10,952,533 |
| U. of Southern California[3] | 32 | 2,484,152 | 57,372 | 33,071 | 385 | 12,685,658 |
| Johns Hopkins U. | 33 | 2,670,600 | 78,204 | 20,177 | 369 | 10,831,473 |
| U. of Iowa | 34 | 2,839,825 | 89,049 | 26,986 | 259 | 9,829,382 |
| U. of Kansas | 35 | 2,620,805 | 70,925 | 25,745 | 292 | 10,197,931 |
| McGill U. | 36 | 2,390,943 | 62,640 | 18,262 | 324 | 10,982,859 |
| Michigan State U. | 36 | 2,431,942 | 86,578 | 19,175 | 320 | 10,397,545 |
| U. of Maryland | 38 | 1,856,510 | 83,642 | 21,756 | 321 | 10,934,347 |
| U. of California at San Diego | 39 | 1,810,844 | 74,428 | 20,273 | 316 | 11,967,176 |
| Howard U. | 40 | 1,618,259 | 83,680 | 26,775 | 262 | 10,045,835 |
| U. of Hawaii | 41 | 2,164,497 | 77,653 | 32,989 | 220 | 8,035,702 |
| Massachusetts Institute of Technology | 42 | 2,062,818 | 54,498 | 21,296 | 275 | 9,292,380 |
| Wayne State U.[3] | 43 | 2,179,666 | 61,745 | 23,774 | 255 | 9,868,092 |
| Syracuse U. | 44 | 2,217,231 | 64,083 | 21,244 | 252 | 7,677,311 |
| U. of Massachusetts | 45 | 2,199,402 | 71,030 | 15,954 | 236 | 9,825,395 |
| Boston U. | 46 | 1,622,336 | 54,574 | 29,177 | 278 | 8,990,001 |
| Louisiana State U. | 47 | 2,270,817 | 61,895 | 23,327 | 279 | 8,095,082 |
| Texas A&M U. | 48 | 1,723,660 | 69,746 | 17,661 | 311 | 9,022,614 |
| U. of Western Ontario | 48 | 1,895,089 | 60,069 | 19,375 | 304 | 7,563,768 |
| Georgetown U. | 50 | 1,613,442 | 66,530 | 21,035 | 285 | 9,149,465 |
| U. of Cincinnati | 51 | 1,581,754 | 55,650 | 19,588 | 297 | 10,519,089 |
| U. of Connecticut[3] | 51 | 2,074,443 | 65,403 | 21,349 | 225 | 8,701,223 |
| Emory U. | 53 | 2,006,423 | 58,707 | 18,383 | 248 | 9,061,297 |
| U. of California at Santa Barbara | 54 | 1,806,039 | 62,203 | 15,600 | 239 | 10,376,881 |
| U. of Kentucky | 55 | 2,043,393 | 54,674 | 20,759 | 266 | 8,282,161 |
| Purdue U. | 55 | 1,746,862 | 63,237 | 20,884 | 265 | 7,350,599 |
| U. of Laval | 57 | 1,595,553 | 57,785 | 14,142 | 270 | 8,466,612 |
| Washington U. (Mo.) | 57 | 2,120,974 | 49,487 | 17,884 | 228 | 6,793,639 |
| Vanderbilt U. | 59 | 1,711,774 | 56,985 | 18,098 | 256 | 8,568,061 |
| Temple U.[3] | 60 | 1,952,593 | 63,939 | 16,296 | 266 | 7,128,893 |
| U. of Missouri | 61 | 2,365,235 | 53,129 | 17,407 | 249 | 6,441,179 |
| U. of California at Irvine | 62 | 1,306,730 | 66,400 | 17,369 | 224 | 9,838,430 |
| U. of Nebraska | 62 | 1,889,500 | 59,785 | 23,511 | 206 | 6,429,384 |
| U. of South Carolina | 64 | 2,225,572 | 58,435 | 19,163 | 198 | $ 6,152,360 |
| Southern Illinois U. | 64 | 1,950,400 | 57,135 | 21,283 | 246 | 7,158,730 |
| U. of Delaware | 64 | 1,778,915 | 55,450 | 21,637 | 207 | 7,362,963 |
| Brown U. | 67 | 2,065,334 | 51,046 | 15,470 | 243 | 8,225,474 |
| York U. (Ontario)[3] | 67 | 1,646,482 | 57,499 | 18,598 | 241 | 7,552,081 |
| Brigham Young U. | 69 | 1,863,224 | 63,582 | 17,847 | 300 | 7,957,247 |
| U. of Rochester[3] | 69 | 2,549,057 | 47,245 | 13,876 | 222 | 7,772,439 |
| U. of Miami | 71 | 1,576,560 | 53,251 | 16,487 | 243 | 7,921,184 |
| U. of Colorado | 72 | 2,146,138 | 58,140 | 13,755 | 204 | 7,181,127 |
| Virginia Polytechnic Institute and State U. | 72 | 1,593,757 | 50,541 | 20,040 | 205 | 7,394,904 |
| Iowa State U. | 74 | 1,708,592 | 55,895 | 20,244 | 204 | 6,449,772 |
| U. of Oregon | 74 | 1,765,633 | 60,452 | 20,536 | 211 | 6,408,666 |
| Dartmouth C. | 76 | 1,664,847 | 58,869 | 20,414 | 182 | 6,438,581 |
| U. of Waterloo[3] | 77 | 1,533,271 | 64,747 | 15,000 | 206 | 5,925,791 |
| U. of Utah | 78 | 1,646,550 | 58,866 | 14,348 | 232 | 6,814,662 |
| U. of Notre Dame | 79 | 1,794,564 | 57,480 | 15,871 | 180 | 6,234,615 |
| Tulane U.[3] | 80 | 1,682,060 | 54,497 | 15,480 | 183 | 6,552,253 |
| Florida State U.[3] | 81 | 1,667,720 | 45,718 | 17,699 | 236 | 6,657,342 |
| North Carolina State U. | 82 | 1,201,552 | 56,661 | 15,373 | 224 | 7,219,187 |
| Queen's U. at Kingston | 82 | 1,672,271 | 40,470 | 15,560 | 223 | 6,164,613 |
| Washington State U. | 84 | 1,492,864 | 38,511 | 21,098 | 207 | 6,773,071 |
| State U. of New York at Stony Brook | 85 | 1,566,698 | 45,382 | 12,331 | 216 | 7,268,991 |
| U. of Oklahoma | 86 | 2,192,100 | 43,371 | 17,417 | 198 | 5,745,844 |
| Georgia Institute of Technology | 87 | 1,532,193 | 68,582 | 28,805 | 112 | 4,154,159 |
| U. of Tennessee | 87 | 1,587,838 | 39,653 | 14,372 | 232 | 5,909,115 |
| U. of Houston | 89 | 1,526,291 | 41,561 | 22,911 | 173 | 5,945,170 |
| U. of California at Riverside | 90 | 1,303,872 | 55,394 | 13,615 | 179 | 6,629,959 |
| McMaster U. | 91 | 1,258,534 | 47,942 | 11,196 | 193 | 6,486,524 |
| U. of Manitoba | 91 | 1,431,307 | 34,692 | 12,020 | 237 | 6,241,521 |
| U. of Guelph | 93 | 1,706,238 | 71,628 | 10,219 | 155 | 4,487,507 |
| U. of Alabama | 94 | 1,693,117 | 40,867 | 17,389 | 178 | 5,244,022 |
| State U. of New York at Albany[3] | 95 | 1,194,982 | 45,333 | 16,399 | 174 | 5,735,900 |
| Case Western Reserve U. | 96 | 1,512,133 | 35,812 | 13,854 | 174 | 5,884,392 |
| U. of Saskatchewan | 97 | 1,300,773 | 48,877 | 10,092 | 174 | 5,619,647 |
| U. of New Mexico | 98 | 1,276,889 | 35,190 | 10,689 | 240 | 6,522,692 |
| Kent State U. | 99 | 1,636,383 | 30,133 | 7,349 | 183 | 6,377,416 |
| Colorado State U. | 100 | 1,103,752 | 34,281 | 12,018 | 139 | 4,959,475 |
| Oklahoma State U. | 101 | 1,440,780 | 31,801 | 10,101 | 184 | 4,322,554 |
| Indiana U. | n/a | 3,881,945 | 115,003 | 33,975 | 521 | 12,935,746 |
| U. of Michigan | n/a | 6,019,919 | 135,011 | 67,115 | 548 | 18,851,310 |
| U. of Pittsburgh | n/a | 2,741,834 | 82,078 | 23,098 | 332 | 11,162,154 |
| Rice U. | n/a | 1,323,470 | 47,935 | 11,721 | 145 | 4,826,953 |
| State U. of New York at Buffalo | n/a | 2,436,454 | 72,120 | 24,085 | 277 | 9,352,679 |

### Non-university libraries

| | Volumes in library | Volumes added | Current serials | Total staff | Total expenditures[2] |
|---|---|---|---|---|---|
| Boston Public Library | 5,806,895 | 239,516 | 16,049 | 655 | $24,191,531 |
| Canada Institute for Scientific and Technical Information, Ottawa, Ontario[3] | 2,074,181 | 90,717 | 31,250 | 223 | 17,657,644 |
| Center for Research Libraries, Chicago | 2,861,183 | 30,711 | 13,636 | 63 | 2,851,632 |
| Library of Congress, Washingon | 20,957,228 | 288,690 | 175,000 | 4,967 | 275,530,000 |
| Linda Hall Library, Kansas City, Mo. | 594,950 | 17,800 | 13,140 | 61 | 2,834,686 |
| National Agricultural Library, Beltsville, Md.[3] | 1,873,874 | 13,771 | 27,000 | 190 | 11,098,000 |
| National Library of Canada, Ottawa, Ontario | 1,131,621 | 51,595 | 20,824 | 530 | 24,729,639 |
| National Library of Medicine, Bethesda, Md. | 1,821,644 | 41,918 | 26,837 | 273 | 17,616,512 |
| Newberry Library, Chicago | 1,412,162 | 9,616 | 7,000 | 104 | 5,781,480 |
| New York Public Library, New York | 6,056,320 | 91,375 | 147,375 | 806 | 24,036,640 |
| New York State Library, Albany, N.Y. | 2,009,402 | 30,643 | 18,682 | 199 | 7,406,001 |
| Smithsonian Institution, Washington[3] | 1,018,165 | 21,240 | 16,814 | 117 | 5,178,826 |

**Note:** Institutions are asked to report figures for their main campuses only, unless a branch campus is indicated.

[1] Based on an index developed by the Association of Research Libraries to measure the relative size of university libraries. The index takes into account the number of volumes held, number of volumes added, number of current serials, total expenditures, and size of staff. Five institutions chose not to have their index figure calculated; they appear at the end of the list of university libraries.

[2] Figures for Canadian libraries are expressed in U.S. dollars.

[3] Includes branches as well as the main institution.

n/a Data not available.

SOURCE: ASSOCIATION OF RESEARCH LIBRARIES